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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,670	10/10/2001	James E. Sealey II	23441B	9294

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EXAMINER	
ALVO, MARC S	

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 03/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary	Application No.	Applicant(s)	
	09/975,670	SEALEY ET AL.	
	Examiner	Art Unit	
	Steve Alvo	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *15 December 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *12-15-03* .
4) ☒ Interview Summary (PTO-413) Paper No(s). *11-18-03* .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

It is noted that the instant claims have an effective filing date of May 18, 2000 which is the date that the term "alkaline pulp comprising cellulose and at least 7% hemicellulose under alkaline conditions with an amount of oxidant sufficient to reduce the average degree of polymerization of the cellulose" was first disclosed.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The term "non-regenerated cellulose" was not originally disclosed and is new matter. Although the disclosed "Kraft pulp" is one type of "non-regenerated cellulose", there are other forms of non-regenerated cellulose, e.g. mechanical pulp, which were not disclosed. Thus the term "non-regenerated" is broader than the original disclosure and is new matter.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over GANNON et al (6,042,769) in view of WO 99/16960 and SAMUELSON et al (5,985,097) with or without LUO et al (6,210,801).

Gannon et al fairly disclose a process for making lyocell fibers comprising the steps of: (a) contacting an alkaline pulp comprising cellulose and hemicellulose under alkaline condition with an amount of oxidant (hydrogen peroxide or ozone) sufficient to reduce the average degree of polymerization of the cellulose to the range of from about 200 to about 1100 and (b) forming the fibers from the pulp treated in accordance with step (a) (see cols. 2-6). Gannon et al teaches the claimed invention except for the limitation of without substantially reducing the hemicellulose content of the pulp or substantially increasing the copper number. Claim 10, see GANNON et al column 3, lines 8-10. WO 99/16960 teaches that alkaline pulp, e.g. kraft pulp treated with sodium hydroxide, is particularly useful in the manufacture of lyocell. It would have been prima facie obvious from the teachings of WO 99/16960 to use alkaline kraft pulp as the fiber of GANNON et al. The kraft pulp of WO 99/16960 is the same non-regenerated cellulose used by Applicant. SAMUELSON et al teaches that the catalysation of the depolymerization of cellulose and hemicellulose during peroxide bleaching can be controlled by monitoring and controlling the ratio of transition metals and Mg in the pulp (column 4, lines 10-22 and 45-47). It would have been obvious to prevent the degradation of the hemicellulose and cellulose in the cellulosic material of GANNON et al by adding the proper amount of Mg as taught by SAMUELSON et al. Obviously such addition would avoid substantial reduction of the hemicellulose content, which would not be degraded. Since the copper number is directly related to the cellulose degradation, see specification, page 16, lines 8-20, it would have been obvious

that preventing cellulose degradation by adding Mg to the pulp during peroxide bleaching as taught by GANNON et al, would prevent an increase in the copper number. It is noted the term "without substantial increasing of the copper number" when read in view of the specification includes increases up to 100%, which is not a preventing of a copper number increase. If necessary, LUO et al teaches decreasing the copper number by treating pulp with sodium borohydride. If necessary, it would have been obvious to prevent an increase in the copper number by treating the lyocell with sodium borohydride to decrease the copper number as taught by LUO et al. The kraft pulp of WO 99/16960 is the same pulp used by Applicant and would have the same hemicellulose content as the instant pulp.

Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "without substantial increasing of the copper number", when read in view of the specification includes increases up to 100%. A doubling of the copper number is a substantial increase in copper number. Thus the term is indefinite.

The argument that a 100% increase is not a substantial increase is not convincing. A 10% increase would be a substantial increase, a 100% increase is an extremely large increase and would not be considered "without substantial increase".

The argument that GANNON uses a different starting material than the instant process is not convincing as it would have been obvious to use non-regenerated cellulose from the teachings of WO 99/16960. The instant process as GANNON forms the lyocell using a solvent. See instant specification, page 23, lines 3-17.

The argument that GANNON degrades the cellulose is not convincing. Reducing the degree of polymerization is not the same as degrading the cellulose.

The argument that Applicant is allowed to define terms in the specification is correct. However, the definitions must be within that conventionally used in the art. The art would not recognize a doubling of copper number to be "without substantial increasing".

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Alvo whose telephone number is 571-272-1185. The examiner can normally be reached on 5:45 AM - 2:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steve Alvo
Primary Examiner
Art Unit 1731

msa